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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,103	03/28/2001	Takahiro Hayashi	33388	5430
7590	10/27/2003			EXAMINER
Pearne Gordon McCoy & Granger 1200 Leader Building Cleveland, OH 44114			FOX, BRYAN J	
			ART UNIT	PAPER NUMBER
			2686	

DATE MAILED: 10/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/806,103	HAYASHI ET AL.
	Examiner	Art Unit
	Bryan J Fox	2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-14 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.
 

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \*    c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

***Specification***

1. The abstract of the disclosure is objected to because the language used on lines 5-6, "of which the function blocks are mounted..." is vague not easily understandable. Correction is required. See MPEP § 608.01(b).

2. The disclosure is objected to because of the following informalities: in page 1, line 12 reads "to reduce the thickness of the lower case and the lower case." Perhaps the applicant means "to reduce the thickness of the upper case and the lower case."

In addition, on page 3, line 25 and page 6, line 3, the language used, "of which the function block is mounted..." is vague and difficult to understand.

In addition, on page 7, line 18 contains the following spelling error: "tot he". Perhaps the applicant instead means "to the".

In addition, the figure numbers used on page 14 (numbers 141, 143, 144, 146 and 148) do not correspond to numbers on the figures. Perhaps the applicant intended to use the numbers on figure 11, numbers 51-57.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, on page 21, line 7 the language "of which a function block is mounted on a hard board are arranged" and on page 21, line 10 "of which a function block is mounted" is vague and indefinite.

Regarding claim 3, the limitation "the connecting board" is recited on page 21, line 25. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 11, on page 23, lines 13-14, and again on lines 15-16, the language "of which the function blocks are mounted on the hard board" is vague and indefinite.

Regarding claim 13, on page 23, line 27 the words "such as" are vague and indefinite.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama (US005493604A) in view of Azartash, et al. (WO9921343A1).

Regarding claim 1, Hirayama discloses a foldable mobile telephone with a receiving section 1 which reads on the claimed "upper case" and a calling section 2 which reads on the claimed "lower section". The receiving section 1 includes volume adjust buttons 14 which read on the claimed "control section", a display 13 which reads on the claimed "display", and an antenna 11 which reads on the claimed "RF

communication section". These components are mounted on a hard upper casing 1. The calling section 2 includes function buttons 22 which read on the claimed "operation section", a battery 26 which read on the claimed "battery" and ten keys 21 which read on the claimed "keyboard". The components in the calling section are mounted on the keyboard. Hirayama does not disclose a vibration section located in the upper casing.

Azartash, et al. discloses a Portable Telephone with a vibrator in the upper casing of the phone as described on page 3, lines 21-22, which reads on the claimed "vibrator section" located on the upper part of the telephone.

It would be obvious to one skilled in the art at the time of the invention to add the above vibrator to Hirayama in order to silently alert users of a phone call.

Regarding claim 2, Hirayama discloses a display 13 described in the specification in column 2, line 23 as a liquid crystal display, which reads on the claimed "liquid crystal display", located in the receiving section 1 which reads on the claimed "upper case". Hirayama does not disclose menu buttons near the lower side of the display.

Azartash, et al. discloses buttons immediately below the display as can be seen in figure 2. These buttons obviously include controlling the menu and read on the claimed "menu selecting section".

It would be obvious for one skilled in the art at the time of the invention to modify Hirayama to include buttons controlling the menu below the display, as taught by Azartash, et al. in order to improve use of the menu and aid in menu navigation.

Regarding claim 6, Hirayama fails to disclose a viewport.

Azartash, et al. discloses a foldable telephone where the display is seen through the viewing window 44 in the folded state on the lower case 36, which reads on the claimed "view port" and can be seen in figure 5.

It would be obvious to one skilled in the art at the time of the invention to modify Hirayama to include the above viewing window as taught by Azartash, et al., in order to allow the use of the display for such functions as caller ID while in the folded state.

Regarding claim 7, the viewing window 44 disclosed by Azartash, which reads on the claimed "view port" is positioned between the microphone 40 and the keypad 32 which reads on the claimed "operation section" and can be seen in figure 5.

Regarding claim 8, Azartash et al. further discloses a transparent or clear window 44 or 12 as is described on page 1, lines 32-34.

Regarding claim 9, Azartash, et al. discloses a transparent window 12 with a magnifying lens as described on page 1, line 38 and page 2, lines 1-2, which reads on the claimed "lens function".

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama in view of Azartash, et al. as applied to claim 1 above, and further in view of Takagi et al. (US005235636A) and Hitachi document (JP06268724A).

Regarding claim 3, The combination of Hirayama and Azartash, et al. fails to disclose a flexible connector/key board.

Takagi et al. discloses a portable telephone with a flexible printed circuit board 8 that is a keyboard. It would be obvious to one skilled in the art at the time of the

invention to include the above flexible keyboard in order to aid in manufacturability and increase portability.

The combination of Hirayama, Azartash, et al. and Takagi does not disclose that the flexible keyboard be used as a connecting board between upper and lower phone portions.

The Hitachi document discloses a folding telephone with a flexible printed circuit board assembly connecting the transmitter, which reads on the claimed "upper casing", and receiver, which reads on the claimed "lower casing" as described in the abstract.

It would be obvious to one skilled in the art to modify the combination of Hirayama, Azartash, et al. and Takagi to extend the flexible keyboard into a connecting board in the application of a folding mobile telephone as taught in the Hitachi document in order to conserve space and create a more flexible folding telephone. After the combination is made, the resultant flexible keyboard/connecting board would read on the claimed "keyboard arranged and accommodated in the lower case is a flexible board" and "the flexible board is shared its use with the connecting board".

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama in view of Azartash, et al. as applied to claim 1 above and further in view of Ikenouchi, et al. (US005835863A).

Regarding claim 4, Hirayama discloses a portable telephone set with a battery pack 26 which reads on the claimed "battery terminal", a mouth piece 12, which reads on the claimed "microphone", and ten keys 21 which read on the claimed "key diaphragm" mounted on the calling section, which reads on the claimed "lower case". The calling

section is one of two sections of the folding-up type portable telephone, so all the above are inherently folded before storing. The combination of Hirayama and Azartash, et al. does not disclose an LED for keys.

Ikenouchi, et al. discloses a wireless telephone with light-emitting diodes for illumination in column 2, line23, which reads on the claimed "LED for keys".

It would be obvious to one skilled in the art at the time of the invention to combine the above LEDs disclosed in Ikenouchi, et al. with the combination of Hirayama and Azartash, et al. in order to provide illumination for use in the dark and increase visibility of the keys.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama in view of Azartash, et al. as applied to claim 1 above, and further in view of Kubo.

Regarding claim 5, The combination of Hirayama and Azartash, et al. fails to disclose an inclined microphone.

Kubo discloses a portable telephone with a microphone 14 that is inclined as can be seen in figure 1.

It would be obvious to one skilled in the art to modify the combination of Hirayama and Azartash, et al. as applied to claim 1 to include the above inclined microphone disclosed in Kubo, in order to bring the microphone closer to the mouth when in use and improve the sound input into the microphone.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama in view of Azartash, et al. as applied to claim 1 above, and further in view of Roloff (DE019723338A1).

Regarding claim 10, the combination of Hirayama and Azartash et al. fails to include a narrowing of the phone casing in the vicinity of the portion connecting upper and lower casings.

Roloff discloses an inflatable handset 14 that is narrower in the center as can be seen in figure 1.

It would be obvious to one skilled in the art at the time of the invention to modify the combination of Hirayama and Azartash, et al. to include the above narrowing of the handset in the vicinity of the connection of upper and lower boards as taught by Roloff, in order to conform better to the grip of a hand.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama in view of Weissappel, et al. and further in view of Tamura.

Regarding claim 11, Hirayama discloses a portable telephone that folds which reads on the claimed “foldable mobile communication terminal”. Hirayama also discloses a receiving section 1 which reads on the claimed “upper case” and a calling section 2 which reads on the claimed “lower section”. The receiving section 1 includes volume adjust buttons 14 which read on the claimed “control section”, a display 13 which reads on the claimed “display”, and an antenna 11 which reads on the claimed “RF communication section”. These components are mounted on a hard upper casing

1. The calling section 2 includes function buttons 22 which read on the claimed “operation section”, a battery 26 which read on the claimed “battery” and ten keys 21 which read on the claimed “keyboard”. The components in the calling section are

mounted on the keyboard. Hirayama does not disclose the location of a vibration section or I/O connector.

Weisshappel, et al. discloses a portable electronic device with an external connector 304 which, as described in column 5, lines 21-23, may be used to couple the portable radiotelephone to a hands free user interface, thus requiring input and output and reading on the claimed "I/O connector". Furthermore the external connector is located on the lower portion of the foldable phone. It would be obvious to one skilled in the art to add an external connector to the phone claimed by Hirayama in order to allow use of a hands free user interface. The combination of Hirayama and Weisshappel, et al. does not disclose a vibration section located in the lower casing.

Tamura discloses a portable telephone with a vibrator 7, which reads on the claimed "vibrator section" located on the lower part of the folding telephone (see abstract and figure a).

It would be obvious to one skilled in the art at the time of the invention to include the above vibrator 7 as taught by Tamura in combination of Hirayama and Weisshappel, et al. in order to silently alert users of incoming calls.

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama in view of Weisshappel, et al. and Tamura and further in view of The Hitachi document and Takagi, et al.

Regarding claim 12, the combination of Hirayama, Weisshappel, et al. and Tamura fails to disclose a flexible connector/key board.

Takagi et al. discloses a portable telephone with a flexible printed circuit board 8 that is a keyboard (see figure 2 and column 2, lines 14-20).

It would be obvious to one skilled in the art at the time of the invention to include the above flexible keyboard as taught by Takagi et al. in the combination of Hirayama, Weisshappel, et al. and Tamura in order to aid in manufacturability and increase portability. The combination of Hirayama, Weisshappel, et al., Tamura and Takagi, et al. does not disclose that the flexible keyboard be used as a connecting board between upper and lower phone portions.

The Hitachi document discloses a folding telephone with a flexible printed circuit board assembly connecting the transmitter, which reads on the claimed "upper casing", and receiver, which reads on the claimed "lower casing" (see abstract).

It would be obvious to one skilled in the art to modify the combination of Hirayama, Weisshappel, et al., Tamura and Takagi, et al. to extend the flexible keyboard into a connecting board in the application of a folding mobile telephone as taught by the Hitachi document, in order to conserve space and create a more flexible folding telephone. The resultant flexible keyboard/connecting board would read on the claimed "keyboard arranged and accommodated in the lower case is a flexible board" and "the flexible board is shared its use with the connecting board".

12. Claim 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama in view of Weisshappel, et al. and Tamura as applied to claim 11 above and further in view of Ikenouchi, et al. and Mendolina (US005751804A).

Regarding claim 13, the combination of Hirayama, Weisshappel, et al. and Tamura discloses a portable telephone set with a battery pack 26 which reads on the claimed "battery terminal", a mouth piece 12, which reads on the claimed "microphone", and ten keys 21 which read on the claimed "key diaphragm" and a vibrator 7, which reads on the claimed "vibrator" mounted on the calling section, which reads on the claimed "lower case". The calling section is one of two sections of the folding-up type portable telephone, so all the above are inherently folded before storing. The combination of Hirayama, Weisshappel, et al. and Tamura does not disclose an LED for keys.

Ikenouchi, et al. discloses a wireless telephone with light-emitting diodes for illumination, which reads on the claimed "LED for keys" (see column 2, line 23).

It would be obvious to one skilled in the art at the time of the invention to add the above LEDs as taught by Ikenouchi, et al. to the combination of Hirayama, Weisshappel, et al. and Tamura in order to provide illumination for use in the dark and increase visibility of the keys. The combination of Hirayama, Weisshappel, et al., Tamura and Ikenouchi, et al. does not disclose the location of a buzzer.

Mendolina discloses a flip phone with a buzzer (see column 1, line 56-57) Although the location of the buzzer is not specifically disclosed, it would be obvious to one skilled in the art at the time of the invention to locate the buzzer in the lower casing in the combination of Hirayama, Weisshappel, et al., Tamura and Ikenouchi, et al. in order to preserve space or aid in manufacturability.

13. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama in view of Weissappel, et al. and Tamura as applied to claim 11 above, and further in view of Roloff.

Regarding claim 14, the combination of Hirayama, Weissappel, et al. and Tamura fails to disclose a narrowing of the phone casing in the vicinity of the portion connecting upper and lower casings.

Roloff discloses an inflatable handset 14 that is narrower in the center as can be seen in figure 1.

It would be obvious to one skilled in the art at the time of the invention to modify the combination of Hirayama, Weissappel, et al. and Tamura with Roloff to include the above narrowing of the handset in order to conform better to the grip of a hand.

### ***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J Fox whose telephone number is (703) 305-0997. The examiner can normally be reached on Monday through Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

*Nguyen VO*  
10/20/2003

NGUYEN T. VO  
PRIMARY EXAMINER